

REMARKS

This Amendment is presented in response to the Office Action of July 13, 2006.
Reconsideration is respectfully solicited.

An INTERVIEW SUMMARY is filed concurrently.

Applicants note their appreciation for the indication of allowable subject matter in claims 33 and 46. These Claims have been rewritten in the independent form. Claims 25 and 37 have also been amended. In applicants' view, since the claims 25 and 37 recited using an insulated glass unit to produce an impact resistant insulated glass unit, the amendment herein which refers to the preamble structure recitations can not raise a new issue. See MPEP § 2111.

In applicants' view, the PTO, to maintain a rejection of claims [Claims 25, 27, 31, 32 and 34-36] under 35 U.S.C. 102 over Langlands, must equate laminated glass with insulated glass units. To reject claims under Section 103 [claims 37-39, 41, 45, 48-50] over Langlands alone requires use of applicants' own disclosure [prohibited by 35 U.S.C. 103(a)].

The claims under rejection are not directed to lamination, although a laminate may be used as, e.g., one of the two sheets recited in claim 25.

However, the rejected claims are directed to an impact resistant insulated glass unit, which is defined by express recitations in the preamble of process claim 25 and of process claim 37. The USPTO has not indicated that the preamble is inconsistent with art recognized definitions of insulated glass units.

Claim 25 recites:

A process of converting an insulated glass unit to an impact resistant insulated glass unit,

wherein an insulated glass unit comprises:

two sheets at least one of which is glass;

a space between said two sheets; and

a spacer, which separates and supports said at least two sheets and forms said space between said two sheets, which space is defined by inner surfaces of said two sheets

wherein the process comprises:

providing an insulated glass unit;

accessing said space and providing a liquid resin formulation on an inner surface, of said at least one sheet of glass,

wherein a layer of said resin, which is liquid prior to cure, is cured and renders said at least one sheet of glass impact resistant; and

producing an impact resistant insulated glass unit

Applicants respectfully traverse the rejection of claims under 35 U.S.C. 102 over Langlands. The PTO takes two positions, one being:

Langlands discloses a method of providing an insulated glass structure comprising at least two sheets...[and] a spacer which separates and supports at least two sheets.. and [is] tape [Office Action, page 2, second full paragraph of Section 4.]

With respect to the PTO's reliance on Langlands col. 5 line 50 et seq., the reference states, that a

"second sheet of glass is laid in position on the first sheet so as to adhere to the tape...[t]he two face-to face sheets are then laid on an inclined tilting table,...and a funnel is inserted between them.

" 1% of silane. adhesion promoter is added to *an amount of UVAC 2721 resin calculated as correct for filling the intersheet volume...*"

Thus the Patent Office incorrectly characterizes the Langlands description at col. 5 line 50 et seq. The tape, in the clear language of Langlands Column 5 line 50 et seq., is not a spacer. Significantly, Langlands does not describe a structure which can be an insulated glass unit.

The PTO further states as a second position:

"The language "insulated glass unit" is not seen to define over the assembly of Langlands [Office Action, page 3 line 4 et seq.]

The language appears in applicants' claims. Also please see MPEP Section 2111.02 [Effect of Preamble ...I. PREAMBLE STATEMENTS LIMITING STRUCTURE.]

The only object of Langlands is to prepare a laminate, which is per se not an "insulated glass unit". Please see Column 2 lines 30 et seq. Langlands defines laminated glass products as

In conventional laminated glass products a sheet of glass is bonded to a layer of polymer, and a further sheet or layer of material is bonded to the other side of the polymer layer, so that the polymer is "sandwiched" between two outer layers. Langlands, Column 1 line 15

A laminate is a sandwich of at least two lamina adhered one to the other. All of the references cited on the PTO-892 form which are directed to laminates, so indicate:

U.S. Patent 3334008 is directed to a glass laminate..."this invention relates to laminates of two solid outer layers wherein at least one of the

outer layers is a layer of glass, and a resinous interlayer comprising the novel adhesive composition described above. [Col. 1 lines 15-20]" The reference states that it deals with the problem, "The adhesion of glass plates to various substrates has long been a problem. This is particularly so when it is desired to adhere a glass plate to another transparent plate, such as glass.[column 1 lines 20-25]". The improvement is , "the silane additive "include 3-glycidoxy propyltrimethoxysilane, 3-(trimethoxysilyl)propyl methacrylate, and 3, 4-epoxycyclohexylethyltrimethoxysilane." {[column 1 lines 65 et seq.] U.S. Patent 4125669 relates to bullet proof laminated safety glass and process for production [cf. Title]. The object of the invention is "to provide bulletproof laminated safety glass which is formed of a silicate glass pane of at least 6mm thickness or an acrylic glass pane... and a polycarbonate pane of at least 1.5mm thickness. [column 1 lines 35 et seq.] The adhesive "is provided for bonding the two panes together... is produced in situ by hardening a binder composition..."[column 1 lines 41 et seq.].

U.S. Patent 3703425 relates to laminated sheets . Please see column 1 lines 59 et seq., "the polyurethane compositions are selected to provide a tough interlayer of superior transparency, and having maximum adhesion to the surfaces of the outer sheets, providing in the laminate high tensile strength and resistance to shock fracturing.." ; also please see the description of the figures at column 2 lines 32 et seq.

U.S. Patent 3509015 at column 1 line 35 et seq., describes: " A common term for such laminates...is "safety glass." Safety glass is a glass sandwich composed of an interlayer material bonding together two or more plates or sheets of glass with such adhesion...that the breaking of the glass results in a minimum dispersion of fragments of broke glass. In U.S. Patent 3703425, laminated sheets of glass or rigid transparent synthetic plastic sheets for "safety glass ..are made by casting the interlayer between the rigid sheets.

U.S. Patent 4299639 is directed to forming laminates. At column 13 line 22 et seq. it is stated, "It is preferred to fill the space 6 with a metered quantity of plastic material 7 which is calculated in advance by taking into consideration the fact that the distancing element 30 will be withdrawn prior to admission of plastic material 7.

U.S. Patent 4234533 relates to a method of bonding spaced sheets by molding resin therebetween to form a bonded laminate. Please see TITLE and ABSTRACT.

U.S. Patent Bayha 5318853 relates to adhesive polyester prepolymer for glass product production. As stated in the ABSTRACT, " The resin developed specifically for this application is an unsaturated polyester

designed to be highly flexible, tough , low exotherm and compatible with t-butyl styrene."

Under Section 2131 of the MPEP, a reference applied as an anticipatory reference must describe each and every element of the claim under examination. Langlands does not describe

providing a liquid resin formulation on an inner surface, of said at least one sheet of glass,

wherein a layer of said resin, which is liquid prior to cure, is cured and renders said at least one sheet of glass impact resistant;

Whatever the interpretation of Langlands, its process---, neither by express written description or by inherency,--- fails to produce an impact resistant glass unit.

Applicants respectfully traverse the rejection of claims under 35 U.S.C. 103 over Langlands. To reject claims under Section 103 [claims 37-39, 41, 45, 48-50] over Langlands alone requires use of applicants' own disclosure [prohibited by 35 U.S.C. 103(a)].

Langlands does not describe providing an insulated glass unit as the piece to be worked upon [cf. Claims 25 and 37]. The tape of Langlands column 5 line 50 is not a spacer. Please see the actual language of Langlands excerpted above. Langlands does not form a resin layer on one sheet of glass. Langlands does not describe retrofitting a building or removing an insulated glass unit from a building; none of the references applied by the PTO describe retrofitting a building or removing an insulated glass unit from a building

The PTO further relies on Langlands column 6 line 28 et seq. Therein Langlands states,

"In some instances the present method may be used to form laminates on existing sheets of frangible material in situ, for example by laminating existing glass doors or windows without removing them from their frames."

The reference relied upon relates to laminate production. It does not describe converting insulated glass units to impact resistant insulated glass units and it does not describe removing insulated glass units from buildings.

In addition, the Examiner relies on Langlands Column 6 lines 50-60, which recites:

In the method of Example 3 it is sometimes of benefit, after the introduction of the resin mixture between the sheets, to tilt the table further than horizontal whereby the resin flows towards the originally unsealed edge of the sheets and forces air out under its weight. This is particularly useful when the resin mixture is viscous.

In applicants' view, Langlands neither provides description of the subject matter of the claims nor does it establish a *prima facie* case of obviousness. Withdrawal of the rejections of claims under 35 U.S.C. 102/103, over Langlands alone, is respectfully solicited.

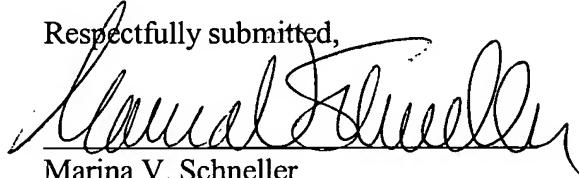
Applicants respectfully traverse the rejections of claims over Langlands in view of secondary reference to Nishitani (claims 25 and 37); Parks and/or Bayha (Claims 28-30 and 42-44). Further, in applicants' view, the Examiner's reliance on Nishitani, newly cited for a description of "tempered glass", does not make up for the deficiencies of Langlands, the deficiencies discussed above.

Amendment After Final

U.S. Patent Application No. 10/77,274
Applicants: Charles Edward BAYHA *et al.*

Moreover, the USPTO relies on Bayha and Park for disclosures of "known polyester adhesives for bonding sheets in glass structures." Applicants claims do not recite use of "known polyester adhesives for bonding sheets in glass structures." If it would be obvious to combine Langlands and Park or Bayha, for the purpose "shown by Langlands for bonding the two sheets", the U.S. PTO would not establish a *prima facie* case of prior claims 25 and 37 or as amended herein.

Respectfully submitted,



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